



Fire Program Analysis – Preparedness Module Fire Resource Funding Categories

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Topic: Describe Fire Resources – Funding Categories

Issue: Definitions of Budgeted Resources, Non-Budgeted Resources, and Loaned Resources are needed to clarify how costs associated with different fireline production resources are tracked through the FPA system. The model needs to maintain budget integrity to accurately report analysis outputs.

Background: The FPA-PM is designed to be interagency and landscape scale. This necessitates the modeling of federal, and potentially state, local, and national shared resources from within and outside the Fire Planning Unit.

Optimization exhaustively tests many combinations of suppression resources to find the optimum solution. The optimization engine can be run iteratively across a range of total cost constraints. The sum of many runs becomes an analysis. The budgeted portion (preparedness) of total cost will also be calculated. Each type of suppression resource has a fire line production rate, preparedness cost, and deployment cost.

Definitions for the Initial Response Costs and Suppression Costs are needed to completely understand the strategic application of FPA-PM. In other words optimization searches for and finds the most effective set of suppression resources to maximize the weighted acres managed (effectiveness) at the least cost. The costs associated with a specific suppression resource do influence the optimal solution.

The ability to attach preparedness resources and budgets to local units and ultimately to the Agency will be an important feature within the reporting function of FPA-PM.

One of the elements that will describe each suppression resource is how it is funded. Currently there are three funding categories, budgeted, non-budgeted, and loaned. The following definitions and examples should increase understanding of how these funding categories are used within FPA-PM.

Key Points:

Budgeted Resources

Fire suppression resources that are primarily funded from the Wildland Fire Appropriation - Preparedness Activity to meet the local units needs associated with initial response to wildland fires. The budgeted resources are associated with the Fire Planning Unit being analyzed. There are many characteristics for each budgeted resource; the table below shows some of the descriptive elements for some budgeted resources in the “TEST” FPU.

Kind	Category	Type	Dispatch Location	Agency	Unit
Equipment	Engine	3	Billy Creek	BLM	Lower Red
Equipment	Engine	6	Oakhurst	BLM	Lower Red
Equipment	Engine	6	Oakhurst	FS	Big Forest
Equipment	Engine	6	Lofty	NPS	Green
Aircraft	Helicopter	3	Granite	FS	Big Forest
Crew	Handcrew	2	Kelly Fields	BIA	Grassy
Equipment	Dozer	3	Cottonwood	BLM	Lower Red
Aircraft	Airtanker	4	Air Field	BLM	Lower Red

Resources used during optimization will be available to the full capacity identified for each dispatch location. This number of fire resources could be greater than what is currently owned. Optimization will exhaustively test many resource combinations. If an additional fire resources would be more efficient in the optimal solution then this solution is allowed. The ownership for reporting will be assumed to be the same as the ownership of the dispatch location and these will be budgeted resources.

Non-Budgeted Resources

Fire suppression resources **not** funded from the Preparedness Activity. Like the budgeted resources non-budget resources are associated with the Fire Planning Unit being analyzed.

There are two groups of non-budgeted resources. 1) Federal resources not funded from the preparedness activity and available to respond. The most common example would be crews or engines funded from hazardous fuels. 2) Non-federal resources, specifically state and local resources that are available to respond.

The list of state and local resources that “may” be available to respond could be quiet large. The fire planner will need to use caution when selecting these resources for inclusion in the FPU analysis. Optimization views resources as always available, so if non-budgeted resources do not meet availability criteria they should be used with caution. The criteria for inclusion in the analysis should be documented locally.

Kind	Category	Type	Dispatch Location	Agency	Unit	Purpose
Equipment	Engine	3	Bald Creek	Local	Valley RFD	
Equipment	Watertender	1	Oakland	Local	Oakland VFD	
Equipment	Engine	6	Oakhurst	FS	Big Forest	Fuels
Equipment	Engine	6	Lofty	NPS	Green	Fuels
Crew	Handcrew (10)	2	Black River	FS	Black River	Fuels
Equipment	Dozer	3	Billy Creek	BLM	Lower Red	Maintenance
Crew	Handcrew (3)		Billy Creek	BLM	Lower Red	Range
Equipment	Engine	3	Randolf	State	Black River	State
Aircraft	Airtanker	4	Air Field	State	Black River	State

Unlike budgeted resources non-budgeted resources are not used in “fill” dispatch locations up to their capacity.

Loaned Resources

These resources would come from outside the FPU or not have their budget associated with the units being analyzed. Loaned resources are funded from the Preparedness Activity, but not funded in the FPU being analyzed.

The largest grouping of loaned resources would be the National Shared Resources, such as smokejumpers, airtankers, and hotshot crews*. Even if the National Shared Resource is physically located within the FPU its budget is associated with a national program. The fundamental criteria for describing these resources is that they are funded from the preparedness activity, but that budget is not associated with the local units participating in the analysis.

The other situation would be a resource stationed outside the FPU, but one that could be reasonably expected to respond to a workload point (fire) inside the FPU. The preparedness budget for this resource is associated with the adjacent FPU.**

Kind	Category	Type	Dispatch Location	Agency	Unit
Aircraft	Airtanker	1	Redmond	FS	National
Crew	Smokejumper	1	Redmond	FS	National
Crew	Smokejumper	1	Boise	BLM	National
Aircraft	Airtanker	2	LaGrande	FS	National
Equipment	Engine**	3	Prairie City	FS	Franklin Forest

* One business rule that has been adopted is that Type I Hotshot Crews will not be used to model Initial Response in FPA-PM. The same is true for Type II National Helicopters. The rationale is that these resources are not controlled at the local FPU level and most often are not available for the Initial Response mission.